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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,458	08/18/2000	Alexander G. MacInnis	37259/SAH/B600	7111

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EXAMINER

HAVAN, THU THAO

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 08/27/2003

25

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/642,458

Applicant(s)

MACINNIS ET AL.

Examiner

Thu-Thao Havan

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-39, 41, 42 and 45-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-39, 41, 42 and 45-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18, 20.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1-3, 5-39, 41-42, and 45-49** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fandrianto et al. (US patent no. 5,982,459) in view of Charles (US patent no. 5,889,949).

As to claims **1, 22, and 41**, the prior art Fandrianto had:

A.) A system on an integrated circuit chip comprising an MPEG video decoder for processing MPEG video data to generate video for displaying and means for displaying the video (col. 1, lines 15-35; col. 3, lines 1-40). Fandrianto teaches an integrated circuit chip system with an MPEG decoder for the video and graphics systems. He also discloses the video display circuit, which includes a graphic controller.

B.) The step of a system bridge controller for coupling a CPU to a plurality of peripheral devices (col. 1, lines 38-46; col. 3, lines 40-61). Fandrianto teaches a host interface having the same functionality as a system bridge controller. The host interface transmits compressed video data to a host bus, a local bus, computer system, and any other peripheral devices.

C.) The step of the system bridge controller performs format conversion between big-endian data and little endian-data, between the CPU and at least one of the MPEG Transport processor, the MPEG video decoder and the means for displaying the video, and between the CPU and one or more of the plurality of peripheral devices (col. 30-32). Fandrianto teaches the host interface between the plurality of peripheral devices such as big endian data, little endian data, CPU, MPEG transport processor, and MPEG decoder for a video and graphics system.

D.) Fandrianto teaches the MPEG video decoder. The MPEG decoder corresponds to the claimed "MPEG video decoder." His system relates to video and graphics system therefore, the MPEG video decoder is also included in a video and graphics system (col. 1, lines 15-35 and 47-62; col. 3; fig. 5-6).

Fandrianto fails to specifically disclose "... a north bridge function... wherein the CPU and the plurality of peripheral devices are situated externally to the integrated circuit chip" as claimed. However, Charles teaches a north bridge (col. 8, line 29 to col. 11, line 45; figs. 1 and 11d) when he discloses a video, audio, graphics, input/output and other processing functions in set top box applications in relation to a processing system with an application specific integrated circuit (ASIC) processor which provides video, audio, graphics and input/output processing functions and is particularly well-suited for use in set top box applications. Other elements which may be connected to bus but are not shown in FIG. 1 include a modem and an optional SIMM socket for expansion of dynamic random access memory (DRAM). The modem may be used to communicate with external telephone, computer or cable network communication

Art Unit: 2672

channels. In a further note, applicant's admitted in the background (page 1, lines 9-15) indicates that it's well known to have a north bridge to couple the host CPU to a peripheral devices. When conventional video and graphics systems on integrated circuit chips are used with a host CPU in the television control electronics, a separate bridge controller, which is also referred to as a "north bridge," is typically used to couple the host CPU to peripheral devices.

Therefore, taking the combined teaching of Fandrianto and Charles as a whole, it would have been obvious to combine a north bridge and the plurality of peripheral devices are situated externally to the integrated circuit chip as claimed to the modified system of Fandrianto. Doing so would enable the host CPU to couple to separate (i.e. external) peripheral devices (Charles: col. 8, line 29 to col. 11, line 45; figs. 1 and 11d).

As to claim **4**, Fandrianto discloses the step of the processing of video and graphics include registers for storing data (col. 4, lines 38-45; col. 6, lines 1-18). Fandrianto teaches the results of the video and graphics are stored in register file.

As to claims **5-8 and 26-29**, Fandrianto discloses the pci devices and the pci bridge for coupling with other devices (col. 3, lines 50-67; col. 31-32). The host interface in Fandrianto teaches the disclosing of PCI bus interacting with plurality of other devices.

As to claims **9-13 and 30-34**, Fandrianto discloses the i/o bus bridge capable of performing format conversion with plurality of devices (col. 4, lines 45-67; col. 6, lines 27-39; col. 31-32).

Art Unit: 2672

As to claims **16 and 35**, Fandrianto discloses the cpu includes both read and write directions (col. 6, lines 50-60; fig. 4). The RAM and ROM of the CPU in Fandrianto are the read and write directions.

As to claims **17 and 36**, Fandrianto discloses the CPU interface block includes one or more buffers used to resolve a speed difference between the CPU and external SDRAM devices (col. 26, lines 38-67; col. 27-28). In columns 27-28, Fandrianto teaches the RISC processor interacts with the SDRAM memory interface.

As to claims **2-3, 15, 18-21, 23-25, 37-40, 42-44, and 45-49**, the limitations of claims 2-3, 15, 18-21, 23-25, 37-40, and 42-44 are analyzed as discussed with respect to claims 1, 22, and 41 above.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Art Unit: 2672

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
August 18, 2003



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600